

KARNATAKA STATE CANCER CONTROL PROGRAMME



KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY



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... help one little Indian
... to help themselves."

... people is to give them
... individuality. They are to
... be opened to what is
... em, and then they will

Swami Vivekananda

SOCHARA

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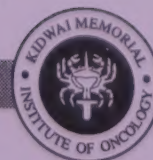
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As we move into the next millennium advances in cancer research have resulted in cure of almost half of cancer patients. But still half of cancer patients either fail to respond or will relapse and die of metastatic disease. There is strong evidence that great majority of human cancers may be avoidable and avoidable causes have been identified for several of them. With the expansion in the absolute number of cancer patients, **the role of prevention in cancer control strategies** will increase in importance. This has important implications for public health services in Karnataka. Cancer control encompasses a number of important elements with the aim of reducing the incidence of cancer and, failing primary prevention, reducing mortality either by detecting the disease at the earlier and more curable stage or by improving survival stage by stage through improvements in therapy. A number of clinical disciplines are involved including epidemiology, clinical science, and behavioural science and health education.

Kidwai Memorial Institute of Oncology, a regional cancer centre and member of UICC, was established in 1973. The government of India accorded the status of regional cancer centre in 1980. The great vision of former Directors Dr. M. Krishna Bhargava and Dr. N. Anantha has been responsible for the rise of this Institute from its humble beginning to its present status of **a major and model comprehensive regional centre for cancer research, prevention and treatment.**

In this booklet, we have presented the achievements of the Institute with regard to cancer prevention, and a proposed model for implementing the cancer prevention programs for entire Karnataka.

- Dr. P.S. Prabhakaran
Director



CANCER PREVENTION STRATEGIES

by

KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY

CANCER PREVENTION STRATEGIES

KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY

PRIMARY

SECONDARY

TERTIARY

- * Education
 - School & Colleges
 - a) PHC Workers / District workers
 - b) Employees of Public Sector & Private Sectors
 - c) Education of Medical personnel
 - d) School Student
 - Students UG /PG
 - Nursing
 - Technicians
 - Doctors of PHC, Districts
 - e) Workshop on - Anti tobacco
Downstaging
Oral/cancer
 - f) Media, Prevention pamphlets

- * Screening
(Mobile Cancer Detection)
- * Screening programme in Inst.
- * Well Women Clinic
- * Pilot projects of Primary and Secondary prevention at Kanakapura
- * Pilot projects in slums area at Bangalore for screening early cancers

- * Curative Treatment
- * Palliative Treatment
- * Terminal Care
- * Peripheral Cancer Centre
 1. Gulbarga
 2. Mandya

Assistance for Treatment

- * Dharmashala
- * KCDF
- * KCMR

Rehabilitation

- Breast
- Laryngectomy
- Ostomy



Cancer Prevention Strategies by KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY

"Prevention is better than Cure". As the age old saying goes, Cancer Prevention is definitely better than cure. This is a rapidly growing area of oncology since many patients come in advanced stage of disease, thereby compromising survival. For virtually every site, statistics show far better survival rates for early cancer than for advanced cancers. The success of treatment is largely determined by the extent of disease.

Regional centres like Kidwai Memorial Institute follow prevention strategies as per the Guidelines of World Health Organization for developing countries.

Cancer Prevention Strategies adopted by the Institute are based on:

1. **PRIMARY PREVENTION:** Primary Prevention refers to 'action taken prior to the onset of disease, which removes the probability that a disease will ever occur'. It signifies intervention in the *pre-pathogenesis phase of the disease*.
2. **SECONDARY PREVENTION:** Secondary Prevention is defined as 'action, which halts the *progress of a disease at its initial stage* and prevents complications'.
3. **TERTIARY PREVENTION:** Tertiary Prevention is defined, as 'all measures available *to reduce or limit* impairments and disabilities'.



KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY BANGALORE

The story of the development of Kidwai Memorial Institute of Oncology as an Independent Comprehensive Cancer Centre is a dream come true. The gestation period was long. The initial effort for establishing a Cancer Centre in Bangalore was conceived by the Mayor, way back in 1957. The originator was the late Shri Rafi Ahmed Kidwai, the then Minister for Food, Government of India. Since no progress was made by the Society in establishing the Cancer Centre, the Government of Karnataka took over the Society in 1970. In 1973, the Institute started functioning with 50 inpatient beds, Pathology laboratory and Radiotherapy services. In 1975, the main block to accommodate 100 beds including operation theatre complex was built. Subsequently, other facilities such as kitchen, laundry, mortuary and residential quarters were established.

The Institute progressed slowly from 1973 to 1980. In order to achieve speedy development, it was conferred "Autonomy status" in January 1980. In November 1980, it became a regional centre for Cancer Research and Treatment. Over the last few years, Kidwai Memorial Institute of Oncology has developed into a Model Regional Centre for Cancer Research & Treatment.

The Institute is managed by a Governing Council. The Director effects the decisions of the Governing Council with the assistance of several staff committees and sub-committees. There is a Scientific Advisory Committee. The Institute is funded by the Government of Karnataka and the Government of India. The Corporation of Bangalore, voluntary service organizations and the people of the State play an active part in the speedy development of the Institute. This is aimed at enhancing the quality of cancer patient care and cancer research. The future vision is to take up the challenging task of cancer prevention and control in the region.

FACILITIES

MULTI-DISCIPLINARY OUT-PATIENT BLOCK

In order to facilitate co-ordinated patient care, the multi-disciplinary outpatient block was built. The ground floor has a main foyer with waiting area, Medical Records, Public Relations Officer, Social Welfare Officer, General Duty Doctor's clinic, Social Investigators for cancer registration, Out-patient clinics – Medical Oncology, Surgical Oncology, Head & neck, Oral, Gynecology, Radiation Oncology and Radio-diagnosis. The first floor of this block houses offices of the Director, Medical Superintendent, Chief Administrative Officer, Financial Adviser, Resident Medical Officer, Nursing Superintendent's & Computer Section. Anti-tobacco Cell, Dept. of Bio-statistics and Cancer Registry, Population Based Cancer Registry, Nuclear Medicine & CT scanner & Community Oncology are also located in the first floor.

JINDAL COMPLEX

Hematological malignancies are the most common cancers among the children. This complex has 24 beds, specially to manage children requiring intensive chemotherapy.

LINEAR ACCELERATOR COMPLEX

This is a well-designed complex housing Linear Accelerator with mould room and dosimetry facilities.

BRACHY-THERAPY COMPLEX

The complex has a ward of 12 beds (hot beds), an Operation Theatre, a Selectron room, a 'cold' room and a Radioisotope store room.

OT – COMPLEX

Operation theatre consisting of seven modern fully equipped operation theatres, and 8 bedded critical care unit with bed side ventilatory support and monitors.

BEDS

The initial bed strength of 50 has now escalated to 450. In addition to this, there is a Dharmashala- a unique project of its kind in the country to provide accommodation to about 250 ambulatory cancer patients along with 250 of their attendants.

LABORATORY SERVICES

Laboratory services include Microbiology, Biochemistry, Pathology and Molecular Biology.

COMMERCIAL COMPLEX

A commercial complex consisting of milk counter, vegetable stall, and Janatha Bazaar Provision Store, has been established facilitating the availability of the above to the patients and their attendants.

RADIOPHARMACEUTICAL COMPLEX

This is a regional centre for dispensing and distributing Radiopharmaceuticals established in collaboration with the Bhabha Atomic Research Centre, Bombay.

RADIATION STERILIZATION PLANT

The Radiation Sterilization Plant (CGS – 300) " Rashmi " was set up to sterilize the disposable medical and surgical instruments by gamma radiation.

MAN POWER

930 personnel are working in various branches. This comprises of Group A(Doctors) – 148, Group B – 98, Group C – 409 and Group D - 275.

EQUIPMENT

The Institute has a wide range of sophisticated diagnostic, treatment and research equipments. Some of the major equipments are:

Clinac – 1800 (Linear Accelerator), Selectron

Whole Body Spiral CT Scanner

Mammography, Lymphangiography, Ultra-sonography, Gamma Camera

Blood Cell Separator, CCX – 100 Autoanalyser, Video Endoscopes

THE INSTITUTE OFFERS ALL MODALITIES OF CANCER TREATMENT

1. Surgery using advanced modalities of cancer Treatment
2. Radiation therapy using Cobalt-60 teletherapy machines, linear accelerator with remote controlled after loading system, manual intra cavitary and interstitial implantation procedure.
3. Chemotherapy
4. Hormone Therapy
5. Blood transfusion and Immuno-haematology services with facilities for blood and blood component therapy.
6. Pain Relief Treatment.
7. Rehabilitation Breast unit, ostomy club, speech therapy and psycho-therapy.
8. Well women and men clinic for screening.

AVERAGE PATIENT LOAD

	Per Day	Per Annum
New cases registered	35	12,000
Cancer Cases	25	7,500
Follow-up cases	580	1,80,000
Operations (Major)	8	1,800

MAGNITUDE OF CANCER PROBLEM IN KARNATAKA

The control of communicable diseases (barring of course AIDS) and the increased life expectancy of the population, has made non-communicable diseases particularly cancer a major public health problem. Magnitude and patterns of cancer in Karnataka are well documented by both Population Based Cancer Registry and Hospital Based Cancer Registry of KIMIO. The estimated number of new cancers in India during 1994 is about 700,000. Of these about 35,000 new cancers are estimated to occur in Karnataka. From the Population Based Cancer Registry (PBCR) of Bangalore, the average annual age adjusted incidence rate of cancer from 1982-1991 is **113 per 100,000 in males and 138 per 100,000 in females**. The higher incidence of cancer in females is due to the greater proportion of cancer of the cervix and breast. PBCR data shows these two sites of cancer constitute over 40 percent of all cancers in women, accounting for over 11,000 cancers in Karnataka in 1994. In terms of prevention of cancer, whether by primary or secondary prevention, over **60 percent of all cancers in males** and nearly **40 percent of cancers among females** fall in to this category.

Stage of Presentation: As per the HCR about 85% male patients and 90% of female patients present when the disease has spread beyond the site of origin. It is difficult to give one single reason for this phenomenon.

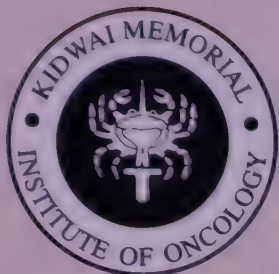
A combination of factors like lack of awareness, economic conditions, inadequate access to proper diagnostic facilities, fear of the disease and poor knowledge of the outcome of treatment could possibly contribute to the advanced stage of presentation.

DISTRICT WISE ESTIMATION

ESTIMATED POPULATION BY DISTRICTS FOR 2000 A.D.

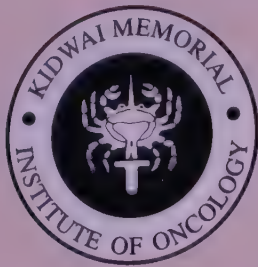
DISTRICTS	MALE	FEMALE	TOTAL
1. Bangalore	4340661	3973510	8314171
2. Belgaum	2097182	2017386	4114568
3. Bellary	1200171	1152744	2352915
4. Bidar	799187	752112	1551299
5. Bijapur	1796513	1705114	3501627
6. Chikkamagalur	362490	564096	1126286
7. Chitradurga	1354197	1279224	2633421
8. Dakshina Kannada	1463227	1560932	3024159
9. Dharwad	2116620	1992761	4109381
10. Gulbarga	1614579	1526320	3140899
11. Hassan	90044	901626	1791670
12. Kodagu	248820	259638	508458
13. Kolar	1297261	1247434	2544695
14. Mandya	956987	926259	1883246
15. Mysore	1936044	1850855	3786899
16. Raichur	1485904	1444175	2930079
17. Shimoga	1100945	1072694	2173639
18. Tumkur	1383907	1296474	2650381
19. Uttara Kannada	6948877	679063	1372940
TOTAL	32593616	26202417	53510733

Estimated Population and New Cancer cases by Districts in Karnataka for 2000 A.D.



Population
New Cancer Cases

Estimated Number of New Tobacco Related Cervical & Breast Cancers in Karnataka, 2000 A.D.



Tobacco Related Cancers
Cervical Related Cancers
Breast Related Cancers

The Estimates based on average Annual Age adjusted rates of cancer of PBCR, Bangalore
Population Estimates are based on population census figures 1991

ESTIMATED NUMBER OF NEW TOBACCO RELATED CANCER, CERVICAL AND BREAST CANCER IN KARNATAKA BY 2000

TOBACCO RELATED CANCERS

DISTRICTS	MALE	FEMALE	TOTAL	CERVIX	BREAST
1. Bangalore	861	522	1383	820	422
2. Belgaum	427	272	699	427	230
3. Bellary	230	148	378	232	125
4. Bidar	139	89	228	140	76
5. Bijapur	283	218	501	342	184
6. Chikkamagalur	131	84	215	132	71
7. Chitradurga	267	168	435	262	141
8. Dakshina Kannada	324	226	550	355	192
9. Dharwar	436	273	709	429	231
10. Gulbarga	286	186	472	291	157
11. Hassan	191	126	317	198	107
12. Kodagu	66	42	108	65	35
13. Kolar	277	179	456	282	152
14. Mandya	204	129	333	202	109
15. Mysore	380	240	620	377	204
16. Raichur	259	170	429	266	144
17. Shimoga	247	157	404	246	133
18. Tumkur	280	178	458	279	151
19. Uttara Kannada	159	100	259	158	85
TOTAL	5447	3507	8954	5503	2949



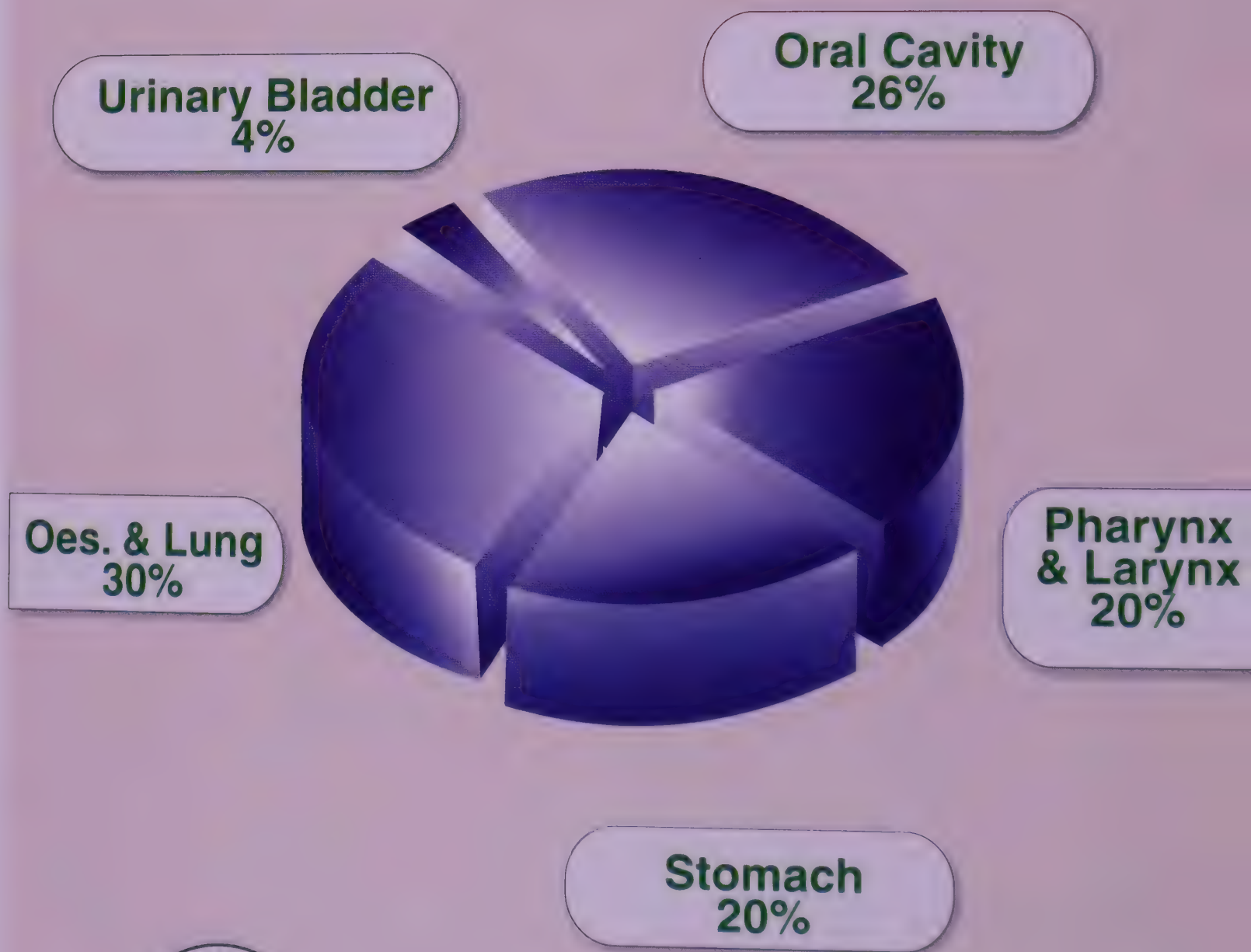
ESTIMATED NUMBER OF NEW CANCERS IN KARNATAKA BY SEX AND DISTRICTS FOR 2000 A.D.

DISTRICT	MALE	FEMALE	TOTAL
1. Bangalore	2596	2964	5560
2. Belgaum	1254	1505	2759
3. Bellary	718	860	1578
4. Bidar	478	561	1039
5. Bijapur	1074	1272	2346
6. Chikkamagalur	336	421	757
7. Chitradurga	810	954	1764
8. Dakshina Kaninada	875	1164	2039
9. Dharwad	1266	1487	2753
10. Gulbarga	966	1139	2105
11. Hassan	532	673	1205
12. Kodagu	149	194	343
13. Kolar	776	931	1707
14. Mandya	572	691	1263
15. Mysore	1158	1381	2539
16. Raichur	886	1077	1963
17. Shimoga	658	800	1458
18. Tumkur	810	967	1777
19. Uttara Kannada	416	506	922
TOTAL	16330	19547	35877

Cancer Treatment Facilities in Karnataka (Existing & Proposed)



Estimated Number of Specific Sites of New Cancers Related to Tobacco use in Karnataka by 2000 A.D.



CANCER PREVENTION STRATEGIES

I. PRIMARY PREVENTION

HEALTH EDUCATION PROGRAMS

At Kidwai Memorial Institute of Oncology, as per the Hospital Cancer Registry data, **50% of all cancers in men, and 30% of all cancers in women is due to tobacco.** Lung and throat cancers are common in men because they smoke cigarettes and bidi; and buccal mucosa cancer is common in women because they chew tobacco.

It is unfortunate that, of late school and college going students are becoming victims to tobacco habit, and in the villages more and more men and women are taking up bidi smoking and tobacco chewing.

In this regard, a Southern Regional Conference was held at Kidwai Memorial Institute of Oncology on 5-6, April 1991. Educating the public regarding the harmful effects of tobacco use.

A. THE FOLLOWING RECOMMENDATIONS WERE SUGGESTED

1. **FOR SCHOOLS, COLLEGES AND ADULT EDUCATION:** The curricula should contain multi-points on tobacco usage. Frequent programs should be conducted for training of teachers in anti-tobacco education. The students should carryout anti-messages to parents, relatives and friends. Youth festivals may be used to generate anti-tobacco material by poster, poetry, essay and cartoon competitions. Students campaign may be organized through NSS, NCC etc., to carry the harmful effects of tobacco eg. **'Each one teach one and each one stop one'**. Necessary educational materials may be set up by NCERT and at Directorate of Medical Services in every State. National 'No Tobacco Day ' may be organized on 11th October against tobacco promoting campaign. Teachers of all categories, especially in schools must set an example by not consuming tobacco in any form.

2. **IN FIELDS OF PROFESSIONAL EDUCATION:** Introduction of teaching on anti-tobacco health education methods during training in medical, dental, para-medical and nursing courses at different levels. Practical training during internship and field training where the professionals go and try to teach the anti-tobacco message to the community. All medical, nursing, paramedical societies, practitioners, social workers, teacher's associations, nutritionists, anganwadi workers and other groups should carryout intensive anti-tobacco activities through continuing medical education (CME) Programs, essays, debates and instituting medals for anti tobacco activities.
3. **PUBLIC EDUCATION:** To increase awareness of parliamentarians, legislators, administrators and media persons regarding the health effects of tobacco and to conduct orientation programs for Zilla Parishads, Gram Panchayats etc. A sustained media blitz should be orchestrated to counter tobacco advertising. This may include press conferences, media write up, radio and television programs etc., All Governmental media, like Radio, TV., should be geared to anti- tobacco activities. Media guidelines should exclude insensible pro-tobacco messages like actors smoking etc.
4. **ROLE OF VOLUNTARY ORGANIZATIONS:** Voluntary health organizations, Women's organizations, Youth Clubs, Rotary, Lions, and Sports associations, etc., be involved to interact with the local community to evolve indigenous methods on reducing tobacco consumption as an accepted social behavior norm in that region eg., passing around of pan and cigarettes in marriages and cheroots at funerals. To develop a phased programme of action plan, an apex nodal agency at the centre should be created for undertaking broad outline of action; orchestrate / initiate different anti-tobacco activities, monitor and evaluate the progress, mid-course corrections, existent material to be located, evaluated and disseminated.
5. **LEGISLATIONS FOR ANTI-TOBACCO MEASURES:** Ban on tobacco consumption in the following places are mandatory; in public places such as hospitals, educational institutions, transport facilities (air travel), buses, trains (separation of smoking and non-smoking compartments), waiting areas, airports (segregation of smoking areas from non-smoking areas), hotel lobbies

(segregation of smoking areas from non-smoking areas), theatres, restaurants, sports areas, museums, factories (factories act to be amended to ban tobacco consumption at work site and to provide segregated area for smoker at recreational – eating facilities). Penalties as well as the nature of the monitoring and implementing agencies to be decided at the government while framing the legislation.

Ban on tobacco sale to persons below 18 years of age, and in the vicinity of educational institutions,. Ban on tobacco advertisement/promotion. Statutory warning on packaging/nicotine and tar content notification. A specified percentage of the tax revenue from tobacco should be set aside for health education on tobacco related diseases and taxes on all tobacco products should be increased. Incentives such as preference in providing employment to teachers, health professionals should be given to non-smokers and fitness demanding occupations like armed forces, para-military forces, police, etc., should be for non-smokers only. To provide monetary and other incentives for at least three years to farmers who intend to change over from tobacco crop. To establish de-addiction clinics for tobacco addicts. To provide for a targeted compulsory compensatory reforestation programme by tobacco producers and industry to make up for tobacco curing related deforestation. A specific tax may be levied for this purpose or targets with penalties for non-compliance.

KIMIO is doing its mite in bringing down the cancer burden in the Karnataka State by conducting regularly its community programs in the rural and urban areas, by conducting cancer education and early cancer detection camps and anti-tobacco drives.

B. ASSESSMENT OF THE EFFICACY OF AN ANTI-TOBACCO COMMUNITY EDUCATION PROGRAMME

The project entitled " the Assessment of the efficacy of an National-Tobacco Community Education Programme" 1986 was started with funds from the Indian Council of Medical Research. The project aimed at evaluating the effectiveness of education on the harmful effects of tobacco in a community. The study compared two other similar communities in the same district, which did not have the benefit of

such education. The key variable that acts as the indicator for the success or failure of the education programme would be the number of individuals **that have quit the tobacco habit** in the experimental area versus the control area.

Kolar district in Karnataka was chosen for the study, because of the ease of operation from Bangalore (by virtue of the district being nearer) and expected high prevalence of the Tobacco habit in that area.

Three areas Dibbur, Malur and Gudibanda comprising villages each with total populations of 60447, 64202, 46878 (1981 census) were chosen on the basis of fair degree of comparability of the health education and socio-economic infrastructure.

Dibbur was chosen as the Experimental Area, Malur and Gudibanda as Control-I and Control-II areas respectively. Apart from the two main objectives the other secondary objectives were **to train Primary Health Centre personnel** to provide health education for prevention of oral cancer mainly by anti-tobacco programme and to train them to inspect the oral cavity, identify lesions and refer appropriately.

The Plan was to have base line survey of the tobacco habit. This was followed by imparting education on the harmful effects of tobacco through the health workers of the primary health centre in only the villages covered under the experimental area of Dibbur. After an interval of 2 years, a repeat survey (first repeat survey) of the tobacco habit was done in the 3 areas.

The results of the first repeat survey were indeed encouraging. **THE SURVEY SHOWED A 43% REDUCTION IN THE HABIT IN THE EXPERIMENTAL AREA.** 0.3% in control area I and 0% in control area II. The corresponding reduction figures for smoking and chewing in men were 17% and 25% in experimental area 0.2% and 0% in control area I and 0% in control area II.

The final survey of the population in the villages in the three areas was done during 1991-92. **The survey showed a 37.8% reduction in the experimental area, 0% in control area I and II. The corresponding reduction figures for smoking and chewing in men were 20.6% and 16.1% in experimental area, 0% in control area I and II.** The difference in reduction of the tobacco habit was

not as pronounced in all age groups combined as it is noticed in the first repeat survey. However, the reduction was higher than first repeat survey in the younger age group.

The results of the Anti Tobacco Community Education Programme indicate that there has been a substantial reduction in the uptake of the tobacco habit particularly among women in the area where health education was imparted. In men also a reduction is seen but this is not as pronounced as in women. The degree of reduction in the habit is not as much between first repeat survey (43.5%) and final (37.8%) as it was between base line survey and final survey but an important feature is that the reduction in younger age group (<35 years) – is more between first repeat survey. This suggests that the response of persons below 40 years is much slower, nevertheless, they appear to have quit the habit after sometime.

The number of persons clinically screened in experimental area, control II area were 5450, 5823 and 6127 respectively. Among them, the proportion of pre-cancerous lesions was 8.5%, 3.9% and 4.1% in baseline survey. In first repeat survey 3680, 3545 and 3762 were 8.0%, 7.0% and 5.5% respectively in experimental area, control area, control I and control II areas.

The package of health education materials were to impart knowledge to change misconceptions and negative attitude about the harmful effects of tobacco, through uniform and standardized health education. The materials utilized to educate illiterates were handbills and folders. The identification card and photo albums were used for interpersonal education. The portable and exhibition panels and films on chewing and smoking were used to educate groups or large gatherings. ***Among all the educational devices used for the antitobacco community education programme the response appeared to be best in order of importance for film*** on the harmful effects of chewing and smoking (61.0% quit, 69% reduced), photo album (14% quit, 12% reduced) and identify card (7.0% quit, 8.0% reduced). The other items used for education had some effect but were not as marked.

C.. ANTI TOBACCO CELL

As a sequence to the successful completion of above mentioned project, Kidwai Memorial Institute of Oncology decided to create an Anti Tobacco Cell to bring about an awareness among different categories of persons in the community on the harmful effects of tobacco usage through education. Wherever possible the plan and design of the study would evaluate the results of that education and further modify and apply the research results accordingly in different community settings and target groups. Research on tobacco related cancer is also one of the objectives.

Specific objectives

1. Prepare background material based on scientific evidence and review of literature on reasons or the need for anti-tobacco activity.
2. Based on the past experience develop anti-tobacco health education materials.
3. Organize and conduct anti-tobacco exhibitions, workshops, seminars, and debates.
4. Adopt Schools/Colleges for anti-tobacco education.
5. Adoption of Karnataka Road Transport Corporation for anti tobacco education.
6. Training programs for the staff of District Cancer Control Programme of Dharwad and Chickmaglur.

Activites

1. Every year the dept. is conducting Anti Tobacco Exhibition at Mysore on the occasion of Dasara Festival from October to December.
2. Annual exhibition on the occasion of Cancer week from 1st Jan to 15 Jan.
3. Every year conducting Anti Tobacco Exhibition and Lectures on the occasion of world's No Tobacco Day.
4. Adopted School/Colleges, Governmental / Non Governmental Organization for Anti Tobacco Exhibition and Lectures.
5. Adopted Bangalore Rural Depots of KSRTC for Anti Tobacco Education since 1992 by way of weekly lectures to the employees and exhibitions on harmful effects of tobacco on health.

6. Organized and conducted training programme for the staff of District Cancer Control Programme.
7. Counseling to tobacco habituates.
8. Development of Health Education Material for District Cancer Control Programme.
9. Participated in Cancer Education and Detected camps at Dharwad
10. Conducted Anti Tobacco competition on Painting and Slogan writing
11. Adopted Hombegowda School for Anti Tobacco Education.
12. Adopted Bangalore Rural Depots of KSRTC for Cancer Awareness.
13. Conducted spouse study in Collaboration with PBCR
14. Involved actively in data collection or influence of use or tobacco in the epidemiological characterization of Lymphoma.
15. Data Collected on HPV and HIV study in collaboration with Microbiology

After 1998

1. Adopted Kanakpura Taluk for Cancer Awareness, Education and Screening Programme. (Phase 1 is completed, Developing the strategies for implementation of Phase II)
2. Conducted Gutka Survey in Schools and colleges of Kanakpura.
3. Conducted Tobacco Survey in Bangalore Urban Population.
4. Analysis, Report generation and Technical assistance to DCCP.
5. Technical assistance for the implementation of DCCP.
6. Planning to adopt rural school or college for Anti Tobacco Education.
7. Plans to impart education regarding harmful effects or tobacco on health to the school and colleges Bangalore and Kanakapura taluk.
8. Efforts are made to establish a rural cancer registry at Kanakapura.

D. ACADEMIC ACTIVITIES

Post Graduate/Under Graduate Courses

This Institute is running postgraduate courses in MD(Radiotherapy) super Specialty courses viz. M.Ch (Surgical Oncology), & D.M. Medical Oncology PG diploma in (Nuclear Medicine) DNM & DRP (Diploma in Radiation Physics), B.Sc. Medical Technology (Laboratory/ Radiotherapy/ Radiodiagnosis)..

In addition, the Institute has initiated a programme of Professional education, technology and expertise transfer through short-term education/ training programs for undergraduate, postgraduate and staff of medical colleges/district hospitals and Primary Health Centres. The main objective of this training programme would be to train the medical personnel in prevention, diagnosis and treatment of cancer.

Library & Information Services

A good library & information service caters to the needs of oncologists, Research Scientists, undergraduates and postgraduates students of different disciplines. Professional information services document delivery service, current awareness service, selective dissemination service and photocopy service etc., CD-ROM Based information retrieval system from National Cancer Institute (USA) database CANCERLIT, Physician Data Query (PDQ And MEDLARS data base and Electronic information services E-Mail and Internet from NIC-NET are available.

E. WORK SHOP ON HEALTH EDUCATION

i. Workshop on Oral Cancer

A Workshop on Oral Cancer for District Level Medical Officers and Radiotherapists was held at Kidwai Memorial Institute of Oncology, Bangalore on 23rd & 24th August 1992. The theme of the workshop was "Early detection and Management of Oral Cancer " DGHS, New Delhi, and WHO jointly organized it. There were participants from the following districts of Karnataka viz: Shimoga, Gulbarga, Mandya, Chickamagalur & Dharwad. The delegates invited were District Surgeons, ENT/Head & Neck Surgeons, Dental Surgeons and Radiotherapists. A total of twenty-four delegates attended this 2 day workshop.

A manual "Overview of Oral Cancer" was prepared for the Workshop. The programme of the Workshop mainly consisted of practical demonstrations. The results of field study of Kidwai Memorial Institute of Oncology, "Anti-Tobacco Community Education Programme" was presented. The results showed that health education leads to a substantial reduction in the use of tobacco. This has a direct application in oral cancer control, as majority of oral cancers and pre-cancerous lesions in our country can be etiologically traced to tobacco chewing.

II. "WOMEN'S HEALTH IN WOMEN'S HANDS: A COMMUNITY APPROACH FOR THE CONTROL OF CANCER CERVIX IN KARNATAKA" THE OBJECTIVES OF THE WORKSHOP WERE

- ☛ To create a forum *where cancer specialists interact with the Panchayat system*; NGO's with an interest in health; members of the health infrastructure; officials of the Departments of Health of Family Welfare, Women and Child Development, and Rural Health and Panchayat Raj; and policy planners, in order to share experiences and examine strategies with a view to develop a plan of action for the control and early detection of cancer cervix.
- ☛ To create an awareness that health workers can be technically equipped to carry out prevention and early detection of cancer cervix.
- ☛ To prepare to launch a campaign for early detection of cancer cervix.

III. WORKSHOP ON PALLIATIVE CARE & PAIN RELIEF

There were two WHO sponsored workshops of Palliative care in 1991 and 1994. The stress was on cancer pain management in terminal care.

Indo-US Workshop on cancer pain management was conducted for professional teams of all the districts of Karnataka to impart knowledge on management of cancer pain and usage of Opioids.

Workshop on Opioids availability in the state of Karnataka sponsored by WHO and Ministry of Health and Family Welfare, Government of Karnataka. This was focused to sensitize the Government officials for the need of Oral Morphine to simplify the complex rules.

Community Programs in Palliative care for Health care Professionals and Public were undertaken regularly by the Institute at various centres.

SECONDARY PREVENTION STRATEGIES FOR SCREENING

a. DOWNSTAGING CANCER CERVIX IN THE INDIAN CONTEXT

The Department of Gynaecologic Oncology, KMIO, supported by the Indian Council of Medical Research (ICMR) in 1991 and subsequently by the World Health Organization (through the Ministry of Health, Government of India) in 1992, started the programme, to assess the feasibility of using the existing public health infrastructure to downstage cervical cancer. The two research projects aimed to determine the effectiveness of women health personnel (both health workers and lady medical officers of the existing health infrastructure) in imparting health education on cervical cancer; performing visual inspection of the cervix and triaging its appearance into normal, abnormal and suspicious of malignancy; and making appropriate referrals. These studies were conducted in Bangalore Rural District in communities served by five primary health centre (PHCs). Anganwadi workers were used to impart health education in one of the primary health centres. Intervention studies were carried out in the areas covered by four primary health centres. The fifth served as a control zone. These studies are now considered to be Phase I of the attempt to develop a strategy for downstaging cancer cervix.

The results indicated that even though staff of the primary health centres could perform visual inspection of cervix for early detection of cancer, disseminating information and empowering women with knowledge about cervical cancer, they could not take the whole burden as they were otherwise involved in several ongoing programs. We had attempted to involve the mahila mandals that already existed in these areas, which however were too few in numbers to have any effect. Hence KIMO began to seek alternative avenues to increase awareness with a new strategy for down staging cancer cervix.

An attempt was made to examine the feasibility by collaborating with two NGOs and the PHCs serving the same communities. The NGOs and the primary health care staff were able to screen a larger number of women than in the earlier study.

A second potential strategy for control of carcinoma cervix was through the involvement of the women panchayat members (in the study areas) who comprise approximately 30% of the system. Attempts were made to motivate these women panchayat members about early detection of cancer cervix in order to encourage women, particularly those in the high-risk age group (35-64 years), to seek screening for cervical cancer with encouraging results.

b. CANCER DETECTION CAMPS

The main objectives were

- ➔ To create awareness
- ➔ To detect cancers at early stage
- ➔ Reduce preventable cancers
- ➔ Anti tobacco education Programme

Average number of People attending the camps: 517
(Male :313, Female: 204)

Average pap smear taken per camp : 185
Average Detected Cases per camp : 5

Mobile Cancer Detection Unit

Works on the principal of opportunistic screening mobile Cancer Detection Camps are conducted with the help of voluntary organization.

- ➔ Total camps conducted - 270
- ➔ Total Population screened - 1,21, 458
- ➔ Average camps per year - 13
- ➔ Cancers detected - 1,787 (1.47%)
- ➔ Cancer Suspected - 2,867 (2.36%)
- ➔ Suspected rate - 2.2%
- ➔ Detected Rate - 1.6%
- ➔ Maximum distance covered - 630 km
- ➔ Minimum distance covered - 20 km

Common Cancers Detected and Suspected

35.8% are Tobacco related cancers are detected

32.8% are suspected

Leading sites

	MALE		FEMALE		TOTAL	
	Susp.	Detec.	Susp.	Detec.	Susp.	Detec.
Tobacco	21	17	16	07	37	24
Related	(48.8)	(60.7)	(22.3)	(17.9)	(32.2)	(35.8)
Cervix	-	-	17	03	17	03
			(23.6)	(7.7)	(14.8)	(4.5)
Breast	-	-	14	03	14	03
			(19.4)	(7.7)	(12.2)	(4.5)
Others	22	11	25	26	47	37
	(51.2)	(39.2)	(34.7)	(66.7)	(40.8)	(55.2)
Total	43	28	72	39	115	67

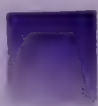
PAP SMEARS: Every year as an average 5000 Pap Smears are taken

- Trichomonal Infections - (7.7%)
- CIN - (2.0%)

The experience that mobile cancer detection camps are not cost beneficial and as per recommendation from WHO etc for developing countries, KMIO has decided now to concentrate on organized screening programs utilizing the mobile camps in a population based way.

So far there are several trials going on in different parts of India in the form of pilot projects. No consensus has been arrived.

Bangalore Rural



Screening programme for early detection of cancers in woman
in the following areas of Bangalore

yes 240
12-223

BANGALORE MAHANAGARA PALIKE INDIA POPULATION PROJECT

The 55 Health Centres of India Population Project are being invited in Screening for Early Detection of Cancers in Women in the following areas of Bangalore

Place of Training	Centres from where field workers will be deputed
Cholanayakanahalli	Cholanayakanahalli, Attur, Kodigehalli, Amruthalli, K. G. Halli
Bagalur Layout	Bagalur Layout, Tindlu, Sulthanpalya, Hafeega School, D. J. Halli (Bore Bank)
Koramangala	Roopen Agrahara, Agara, Adugodi, Koramangala, Sonnennhalli
Kodihalli	Kodihalli, Vibhuthipura, Byappanahalli, Murphy Town, Bhuvaneshwarnagar
Shankaranagar	Shankarnagar, Nandini Layout, Hegganahalli, Mallasandra, Laggere
Moodalpalya	Moodalpalya, Govindrajanagar, A.D. Halli, Kamakshipalya, Okalipuram
Mathikere	Mathikere, M. S. Palya, Peenya, Nela Maheshwara, Geleyara Balaga
Yarabnagar	Yarabnagar, K. S. Layout, Uttarahalli, C. T. Bed, Vidyapeet
T. R. Mill	T. R. Mill, Avalahalli, Bapujinagar, Anjanappa Garden, Sirur Park
Gangondanahalli	Gangondanahalli, Bangarappanagar, Mallathhalli, Pantharapalya, G. D. Park
J. P. Nagar	J. P. Nagar, N. S. Palya, Yelachenahalli, Tavarekere

c.. PILOT PROJECTS UNDERTAKEN (1998)

The Institute has undertaken small Pilot Projects for Cancer Education and organized screening programs, with help of medical unit in the following areas

SRIRAMANAHALLI: This is a village situated about 26 Km from Bangalore city. There is an NGO named "People's Trust of India". This Organisation has adopted 18 villages in the area for its activities. KMIO is collaborating with this Organization to conduct cancer education and Screening programs. Phase I is completed (survey + Knowledge /Attitude / Practice (KAP study) Phase II i.e.intervention (education + screening) is underway.

KANAKAPURA TALUK: This Taluk has been adopted by KMIO for the same purpose with help of voluntary Organisation. Phase I is completed. Intervention will start shortly.

In collaboration with **INDIA POPULATION PROJECTS-8 (IPP-8)**, KMIO has trained the link workers and the doctors for education and for taking Pap smears. Phase of intervention will begin shortly.

MANDYA DISTRICT: The same programme to use the Peripheral Cancer Center as an infrastructure is being planned for Mandya District.

d. HOSPITAL BASED CANCER DETECTION

The hospital based cancer detection unit is in the premises of the institute. This is conducted weekly with prior appointments and a token fee of Rs.100/-

Clinical examinations by specialists along with baseline investigations are conducted. The advantage is that since it is situated in the hospital premises specialists opinion is readily available. The disadvantage is that the screening is opportunistic therefore requires a highly indicated population.

In a year we register about 520 cases on an average and the pickup rate of cancers is low. Those that are picked up are however detected in early stages.

e. CANCER CONTROL ACTIVITIES

The Kidwai Memorial Institute of Oncology (KMIO) as the apex body for overall cancer control in the State is directly involved in the development of peripheral cancer centres attached to medical college hospital/district hospitals in the State. Two such centres were conceived and implemented under the aegis of Kidwai Memorial Institute of Oncology at Gulbarga and Madya District. Dist. Level Cancer Control activities are functioning at Dharwad and Chickmaglur. An Oncology Wing has been established at KMC, Hubli, under the technical guidance of KMIO.

III. TERTIARY PREVENTION

Kidwai is focusing on the Tertiary prevention through developing multi disciplinary treatment facilities. An effective screening programs should always have follow up treatment facilities. Otherwise the aim of screening will not be achieved.

SURGICAL ONCOLOGY

Surgical Oncology is now concentrating on organ preservation, micro vascular reconstruction and laser surgery.

MEDICAL ONCOLOGY

To improve cure rates the department is starting high dose therapy with peripheral stem cell support.

RADIATION ONCOLOGY

The primary theme of Radiation Oncology now is towards curative Radiotherapy with less mobility. So it is now planned to set up conformational radiotherapy and strengthen brachytherapy.

SUPPORTIVE SYSTEMS

The supportive systems are being equipped with better diagnostic aids in order for better diagnosis and improve patient care.

PALLIATIVE CARE

A multidisciplinary palliative care is now functioning, where a complete professional team concentrates in giving life with dignity to terminal cancer patients.

2000 new cases 3000 Follow up cases are being registered at the Palliative care centre at the Institute per year and so far 37000 patients were benefited. The goal is to give quality of life and maintain a life with dignity.

PERIPHERAL CANCER CENTRES

Many patients with cancer drop out during half way through treatment. The reasons for such drop out are because of long stay in the city of Bangalore. This is due to low socio economic status of the patients. It was decided to start peripheral cancer centres with facilities for diagnosis and treatment. Radiotherapy units were installed to treat the common cancers like head & neck and cervical cancer. Two cancer centres; one at Gulbarga and one at Mandya were started.

GULBARGA PERIPHERAL CANCER CENTRE

This was started in 1990, which has facilities for diagnosis and treatment. Since last two years, improvement in the centre has taken place with 50 beds, provision of drugs and medicines and facilities for diagnosis and treatment. Approximately **375 patients** are being treated at the centre. This centre provides help to not only patients from Gulbarga but to adjacent districts like Bidar and Raichur. 650 patients are admitted annually (both new & follow up) and follow up plus new patients is around 3500.

MANDYA PERIPHERAL CANCER CENTRE

The peripheral cancer centre is also well equipped with medical personnel for diagnosis and facilities for treatment. The centre has latest equipment for diagnosis and treatment. Approximately **350 patients** are being treated annually in the centre. About 1000 diagnostic test are being carried out annually.

Both centres are working under the expertise of the Institute. These two centres have taken a way some load of cancer patients from the Institute.

REHABILITATION

Majority of patients require rehabilitation. A cell which comprises ostomy clinic, breast cancer care, voice rehabilitation and psychological counseling are functioning to give maximum care and better quality of life.

SOCIAL AND FINANCIAL ASSISTANCE

COMMUNITY PROGRAMS

(A) DHARMASHALA: The Community services of the Institute are wide ranging. Realizing the needs of cancer patients, more an ordeal for the patient's attendants to stay for months together in a city like Bangalore with spiraling room tariffs and escalating expenditure on food etc., and also considering anxiety situation of majority of patients and their attendants, cooking their food under the sky, taking shelter under the trees, sleeping in the corridors, the ' Bangalore City Corporation Sri Venkateshwara Dharmashala' – a unique project in the country was built. About 250 ambulatory cancer patients along with about 250 of the attendants are admitted to this facility to offer all cancer care services free. The Dharmashala has dormitories and 57 single rooms, kitchen, bath and toilet complex, colour TVs, and stage for recreational activities. Some of the inmates are taught sewing, plastic bag making and paper envelopes so that they can earn some money during their stay and subsequently replenish their income.

B. PERPETUAL FREE FEEDING ENDOWMENT DONATION SCHEME

This scheme has been launched to feed cancer patients and their attendants free of cost lodged at Dharmashala. On designated day, year after year to commemorate the Birth, Marriage or death Anniversary of the Donor or his nominee on payment of an Endowment donation of Rs.10,000/- the meal is served. The response from the community has been overwhelming

C. KIDWAI CANCER DRUG FOUNDATION

In order to help thousands of poor and deserving cancer patients who need costly anti-cancer drugs for treatment " Kidwai Cancer Drug Foundation " was

started from December 1991. The Government of Karnataka is sanctioning Rs.10.00 lakhs every year. The interest amount earned out of the above donations is being utilized for providing drugs to the poor and needy patients.

D. CARE AGAINST TUMOR (CAT) DURING LIFE SPAN

Cancer can come to anyone of us at any time due to many known and unknown risk factors. Most of the patients are unable to get timely complete and appropriate treatment because of the huge finances, required towards the diagnosis and the treatment. To reduce the unexpected burden to patient and their families in the event of cancer occurrence, Kidwai Cancer Care Foundation Trust (KCCFT) introduced a scheme which will provide financial assistance by way of giving appropriate, complete and timely treatment with the best expertise in the event of diagnosis. Any person can enroll as a member in 'CAT' with one time payment of Rs.1000.

E. SHANTHIDHAMA

The Shanthidhama – A Rehabilitation and Continuing Care Centre is a unique project for management of cancer patients. In this centre the patients are offered all diagnostic and treatment services and also psychological, spiritual, rehabilitation and occupational therapy services.

This project has been successfully completed through contributions from Helpage India, Voluntary Organizations, Philanthropists and host of others. This provides single room accommodation for 36 patients especially built with bath and sit out, a lounge and a kitchen.

OUR FUTURE STRATEGIES OF CANCER PREVENTION

The future strategies of cancer prevention are based on our experiences of the pilot projects adopted by the institute during the last two decades. The screening projects undertaken by the Institute are not cost efficacious.

THE STRATEGIES ARE NOW FOCUSED ON PRIMARY, SECONDARY AND TERTIARY PREVENTION.

PRIMARY PREVENTION


Health Education is the Primary target. The Institute is aiming to cover Bangalore, Mandya, Gulbarga and Kanakapura.

SECONDARY PREVENTION

1. Screening Programme for cervical cancer based on WHO guidelines:for Cervical Cancer Screening with Cervical Cytology:for developing countries (Programmatic Recommendations: (WHO) Tunis 1999, Lahore, 2000)

Greatest burden in developing countries with minimal resources, hence minimal requirements are proposed as a priority to decreasing the number of women dying from cervical cancer.

1. Achieve highest possible coverage rate (80%)
 - a) By targeting high-risk women between 30-60 years, where 90% of cancers occur.
 - b) Aim for one Pap smear per women in her lifetime. Once this has been achieved, the aim should be 10 yearly and 5 yearly smears depending on the resources.
2. Choose a population based approach as opportunistic screening is not cost effective.
- II. The screening programme will cover the districts of Mandya, Gulbarga, Kanakapura, Hubli, Dharwad and Chickmanglure
- III. The existing Primary Health Care systems, Medical colleges and other private and voluntary organization services will be utilized for health education and screening programs.

The logo is a circular emblem. The outer ring contains the text 'K. J. SOMAIYA MEMORIAL' at the top and 'INSTITUTE OF ONCOLOGY' at the bottom. The center features a stylized figure of a person with arms raised, holding a large 'T' symbol.

KARNATAKA STATE CANCER CONTROL PROGRAMME

PROPOSED MODEL

KARNATAKA STATE CANCER CONTROL PROGRAMME PROPOSED COMPREHENSIVE INTEGRATED MODEL

(I) PREAMBLE

The need for early detection of carcinoma cervix in India in order to decrease mortality is well known. No significant progress has been made until now, probably due to lack of a suitable model for India. In spite of extensive work done in several parts of the country, conventional models have failed to produce the desired results. Hence there is a need for innovative methods to suit our socio-economic conditions.

THE CONVENTIONAL MODELS

1. **OPPORTUNISTIC SCREENING:** This type of screening was successful in America. It is unlikely to succeed in the Indian scenario as most of our rural population are illiterate and have no access to such facilities.
2. **ORGANIZED POPULATION BASED SCREENING:** This project was successful in Finland. WHO recommends this project for developing countries - at least once in a lifetime screening for women between 35 & 60 years and covering at least 80% of the population.
3. **VISUAL INSPECTION METHOD:** This method was studied in KMIO in a ICMR - WHO project using the existing health infrastructure. There were many problems encountered.
 - a. The existing health infrastructure is already over burdened with National and State health projects. Hence the personnel were very reluctant to accept any more additional programs. The cancer control projects need commitment in terms of time and dedication.
 - b. To improve efficiency, NGO's were involved to educate the people and motivate them to "demand service" from the existing health infrastructure. Unless the NGO's involved are totally dedicated and committed, it would not be practical to apply all over Karnataka. NGO's are ready to involve themselves in a time bound programme only.
 - c. Many women were very reluctant to undergo visual inspection. The compliance rate was very low, due to various reasons.

